

# EUROPEAN PATENT OFFICE

## Patent Abstracts of Japan

PUBLICATION NUMBER : 09330993  
 PUBLICATION DATE : 22-12-97

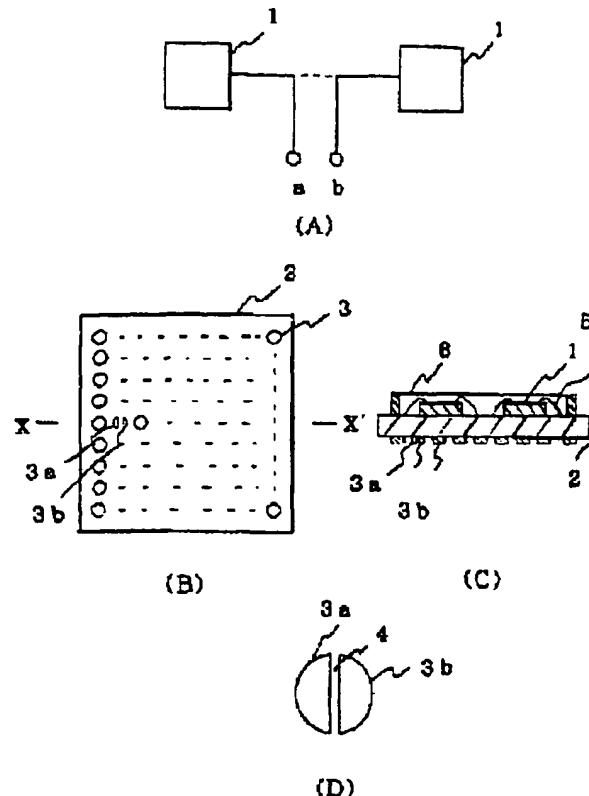
APPLICATION DATE : 11-06-96  
 APPLICATION NUMBER : 08171852

APPLICANT : NEC CORP;

INVENTOR : MURAKAMI MASAHIKE;

INT.CL. : H01L 23/12 H01L 21/66

TITLE : SEMICONDUCTOR DEVICE



**ABSTRACT :** PROBLEM TO BE SOLVED: To easily test a semiconductor device having a BGA(ball grid array) on which a plurality of semiconductor chips are mounted.

**SOLUTION:** In a BGA structure, solder bump forming lands 3 are separately formed and a wiring which connects between semiconductor chips is divided and separately connected to the solder bump forming lands 3a and 3b. Then, after the semiconductor chips 1 are mounted on a substrate 2 and connected to the substrate 2 through metallic wires 5, the chips 1 are sealed with an epoxy resin 6 and tests are conducted by using the solder bump forming lands 3a and 3b and other solder bump forming lands 3. After testing, solder bumps are formed of solder balls, etc. When the solder bumps are formed, the solder bump forming lands 3a and 3b are electrically connected and a semiconductor device is formed.

COPYRIGHT: (C)1997,JPO